



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: WCM-121

November 7, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Rob Hartman
RCRA/CERCLA Manager
FMC Corporation Pocatello Plant
P.O. Box 4111
Pocatello, Idaho 83202

RE: Second Notice of Deficiency (NOD) Pond 17 Closure Plan, Astaris
Pocatello Facility, EPA ID # 07092 9518

Dear Mr. Hartman:

In June 2001, FMC/Astaris submitted the Closure Plan for Pond 17. The U.S. Environmental Protection Agency Region 10 (EPA) is providing the public an opportunity to comment on the plan from October 4, 2001 through November 16, 2001.

EPA issued FMC/Astaris NOD on Section 1 through Section 10 of the Closure Plan on October 1, 2001. A statement identifying deficiencies and required modifications which primarily focus on the Quality Assurance Project Plan (QAPP) is enclosed. The modifications described in the enclosed comments must be made before EPA can approve the plan. FMC/Astaris must modify the plan to address the items identified in the October 1, 2001 NOD within 30 days of receipt of this letter and provide a response to the enclosed comments within 45 days of receipt of this letter. The modified plan must include changes to the closure procedures resulting from FMC's decision to close the plant including plans to manage water the company had planned to reuse within the plant.

These enclosed modifications are necessary to ensure adequate controls are in place to minimize releases of hazardous waste and hazardous constituents to protect human health and the environment. As noted in the comments, provisions for continued phosphine and hydrogen cyanide monitoring and responses in the event elevated gas concentrations are detected must be part of the modified closure plan.

If you have any questions, please contact Linda Meyer at (206) 553-6636 or email Meyer.Linda@epa.gov.

Sincerely,

FJR Richard Albright, Director
Office of Waste and Chemicals Management

FILED

Enclosure

cc: Susan Hanson, Shoshone-Bannock Tribes w/enclosure
Jeanette Wolfely, Shoshone-Bannock Tribes
Blaine Edmo, Chairman, Fort Hall Business Council
Paul Yochum, FMC/Astaris

FILED

**Pond 17 Closure Plan NOD 2 QAPP
CONCURRENCES:**

INITIALS						POLICY	FRIGIDIS INFO SUBMITTED
<i>SM</i>							
NAME	Meyer	Boyd				YES NO YES NO	
DATE	11-5-01					IF YES, BC ATTACHED	

PEER REVIEW:

INITIALS	<i>SP</i>				
NAME	Palmbo	Fisher	Brown	Orlean	Hedeon
DATE	4/1		11/6/01		

2

bcc: Andy Boyd
Sylvia Burges
Gil Haselberger

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City, State, ZIP: *Pocatello, ID 83202*

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Rob Hartman
RCRA/CERCLA Manager
FMC Corporation - Pocatello Plant
PO Box 4111
Pocatello, ID 83202

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POND 17 CLOSURE PLAN

Dated June 2001

ATTACHMENT 10-1: SAMPLING AND ANALYSIS PLAN FOR POND 17 POST-CLOSURE, GROUNDWATER MONITORING, JUNE 2001

Attachment 10-1a: Quality Assurance Project Plan

GENERAL COMMENTS

- 1 The hierarchy and interrelationships among the QAPP and associated Field Sampling Plans (FSPs) must be clarified.
 - 1.1 The QAPP states that its requirements are implemented through a series of ten FSPs. It specifies that Attachment 10-1b is the FSP for Pond 17, but does not discuss the remaining nine FSPs. The QAPP must list and describe all associated FSPs.
 - 1.2 The Pond 17 Closure Plan table of contents lists the QAPP under "Attachment 10-1: Sampling and Analysis Plan for Pond 17 Post-Closure Groundwater Monitoring." However, the subject QAPP addresses nine Waste Management Units (WMUs) at the facility, one of which is Pond 17. The QAPP must state clearly its scope, and adhere to it throughout.
- 2 The subject QAPP is a generic document that addresses groundwater monitoring activities at nine WMUs. The QAPP must indicate clearly which requirements apply to groundwater monitoring activities at Pond 17, and which do not. It must also provide the requisite level of detail to accomplish the objectives of this project (see applicable Specific Comments below).
- 3 The QAPP must list the individuals/organizations to whom the approved QAPP, FSPs, and subsequent revisions will be issued. This list should include all persons responsible for implementation, the QA managers, and representatives of each group or organization involved.

SPECIFIC COMMENTS

- 4 Page 1, Section 1, Project Management: The QAPP must invoke and comply with the most recent version of *EPA Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March 2001. This document and its companion guidance document (EPA QA G-5) are available through EPA's website at http://es/epa/ncerqa/qa/qa_docs.html.

5 Pages 1-3, Section 1.1, Project Organization:

- 5.1 The QAPP must identify all project participants, including the individual responsible for overall project execution. The senior-most individual identified in the QAPP is the "Astaris Environmental Supervisor or Engineer." The QAPP must identify one specific individual to be responsible for this critical role.
- 5.2 The QAPP must identify a project quality assurance manager and demonstrate that she or he is independent of the data generating unit. This does not require independence from senior corporate managers who are nominally, but not functionally, involved in data generation, use, or decision-making.
- 5.3 The QAPP must identify the individual responsible for maintaining the official, approved QAPP and accompanying FSPs.
- 5.4 The QAPP must identify all participating organizations, including contractor organizations with responsibilities related to environmental data operations (i.e., sampling, analysis, and data validation).
- 5.5 The QAPP must specify the nature and extent of the authority (e.g., stop and start work, hiring and firing of personnel) of each function.
- 5.6 The QAPP must describe the protocols in place to verify the qualifications and capacity of support contractors (i.e., laboratory, sampling contractor, and data validation contractor), select support contractors, monitor each contractor's performance, and verify and ensure initial and continued compliance with the QAPP and associated FSP. These protocols must address specific procedures and responsibilities.

6 Page 3, Section 1.2, Background: The QAPP must state the specific problem to be solved, decision to be made, or outcome to be achieved. The QAPP must also provide sufficient background information to provide a historical, scientific, and regulatory perspective for this particular project, i.e., groundwater monitoring relative to the closure of Pond 17. Critical background information needs include: the nature and history of the wastes managed in Pond 17, engineering controls and physical characteristics of the WMU, and relevant geological and hydrogeological site conditions.

7 Page 3, Section 1.3, Project Description: The QAPP must provide a summary of all work to be performed and products to be produced under this project at the Pond 17 WMU. The QAPP must explain how this project will resolve the problem or question described under Section 1.2, once revised.

8 Page 4, Table 1, WMU-Specific RCRA Groundwater Monitoring Wells: The information

in this table appears to indicate that the monitoring program for Pond 17 is for detection only, rather than detection and compliance. The QAPP must clarify the nature and objectives of groundwater monitoring activities at Pond 17 and provide a rationale.

9 Page 6, Section 1.4.1, Detection Monitoring:

- 9.1 The QAPP must invoke and comply with EPA's Guidance for the Data Quality Objectives Process (G-4, August 2000) and Guidance for the Data Quality Objectives Process for Hazardous Waste Sites (G-4HW, January 2000). These references are available through EPA's website.
- 9.2 The QAPP must identify the specific type, quantity, and quality of data that are required to meet the objectives outlined for the Pond 17 Closure and Post Closure Plan. Specifically, the QAPP must explain how the stated objectives translate into the QAPP-defined sampling and analysis specifications, and how the resulting data will be used to achieve the specified objectives.
- 9.3 The QAPP must provide a basis or rationale for determining the chemicals of concern for this project (as listed in Table 3A, page 8). This rationale must take into consideration the types and levels of wastes managed in Pond 17, and historical data.
- 9.4 The QAPP must specify which project samples will be analyzed for total metals and which will be analyzed for dissolved metals. The QAPP must specify whether samples for dissolved solids will be filtered in the field or at the laboratory.
- 9.5 The QAPP must address sample representativeness, comparability, and completeness. The QAPP must describe or reference the specific procedures and equations to be used to calculate the statistics for precision, accuracy, and completeness, i.e., percent completeness, relative percent difference, percent recovery, relative standard deviation, and detection limits. The QAPP must specify the controls in place to ensure comparability with historic data (as discussed in the FSP).

10 Page 6, Section 1.4.2, Compliance Groundwater Monitoring: Based on the information provided in Table 1, it would appear that this section is not relevant to groundwater monitoring activities at Pond 17. The QAPP must be clarified on this point.

11 Page 7, Table 2, Groundwater Protection Standards: Based on the information provided in Section 1.4.2, it would appear that the information in this table is relevant only to compliance monitoring and, hence, not relevant to groundwater monitoring activities at Pond 17. However, footnote number four makes reference to Pond 17. The QAPP must

be clarified on this point.

- 12 Pages 9-10, Table 3B, Summary of Required Analyses Compliance Monitoring: Based on the information provided in Section 1.4.2, it would appear that the information in this table is relevant only to compliance monitoring and, hence, not relevant to groundwater monitoring activities at Pond 17. The QAPP must be clarified on this point.
- 13 Page 11, Section 1.5, Project Narrative:
 - 13.1 The QAPP states that “groundwater monitoring at the Astaris Facility will be conducted to detect leaks, determine if concentrations exceed groundwater protection standards, and determine if chemicals listed in 40 CFR Part 264, Appendix IX are present at the facility.” The QAPP must specify that each of these objectives apply to groundwater monitoring activities at Pond 17.
 - 13.2 The QAPP must clarify what is meant by “groundwater samples will be collected ... in accordance with the requirement specified in the companion Field Sampling Plan(s) and the procedures in the applicable WMU-specific FSP.” How many and which FSPs address the sampling requirements for groundwater monitoring activities at Pond 17? The Closure Plan includes only one FSP for groundwater monitoring. Would this be the “companion FSP” or the “WMU-specific FSP”? The facility must provide both for review.
- 14 Page 11, Section 1.6, Special Training Requirements/Certification: The QAPP must address the personnel training requirements specified in EPA QA/R-5, Element A8: Special Training/Certification. Specifically, the QAPP must:
 - 14.1 Identify and describe any special training or certifications needed by personnel and support organizations (e.g., laboratory, sampling contractor, and data validation contractor).
 - 14.2 Discuss how such training will be provided and how the necessary skills will be assured and documented.
- 15 Page 11, Section 1.7, Documentation and Records: The QAPP must address the document control requirements specified in EPA QA/R-5, Element A9: Documents and Records. Specifically, the QAPP must:
 - 15.1 Describe the process and responsibilities for ensuring that project personnel (including support contractors) have the most current approved version of the QAPP and accompanying FSPs, including version control, updates, distribution, and disposition. These processes must take into account complications that may arise because the subject QAPP has been included in more than one closure plan.

- 15.2 Itemize the information and records that must be included in the data report package and specify the reporting format for hard copy and any electronic forms. The QAPP states that "Laboratory documentation and records requirements are specified in the laboratory QAPP." The laboratory's QAPP must be provided to EPA for review.
- 15.3 Identify any other records and documents that will be produced.
- 15.4 Specify or reference all applicable requirements for the final disposition of records and documents.
- 16 Page 11, Section 2, Measurement/Data Acquisition: The QAPP must describe the experimental data collection design for the project as specified in EPA QA/R-5, Element B1: Sampling Process Design. Specifically, the QAPP (or companion FSP) must describe the rationale for the sampling network design, well location, and measurement parameters of interest.
- 17 Page 12, Section 2.2, Sample Handling and Custody Requirements: While field sample handling and custody procedures are included in the FSP, the QAPP must describe the requirements for sample handling and custody during transport, analysis, and storage.
- 18 Page 12, Section 2.3, Analytical Methods Requirements:
 - 18.1 The QAPP must specify roles and responsibilities relative to the review and approval of the laboratory's "established quality assurance/quality control (QA/QC) plan."
 - 18.2 The QAPP must require the use of the same methods as those used to generate the historical data against which the project data will be evaluated.
 - 18.3 The QAPP states that "analyses will be performed in accordance with standard operating procedures consistent with the QA/QC plan." The QAPP must specify and include these standard operating procedures.
 - 18.4 The QAPP must describe how system failures are to be addressed, specify responsibilities for corrective action, and address how the effectiveness of corrective actions will be determined and documented.
 - 18.5 The QAPP must include or reference the specific procedures that will be used to determine MDLs.
- 19 Page 12, Section 2.4, Quality Control Requirements: The QAPP must require that sample

containers be selected, prepared, cleaned, and controlled per EPA Directive #9240.0-05A Specifications and Guidance for Contaminant-Free Sample Containers (EPA 540/R-93/051, December 1992).

20 Pages 12-13, Section 2.4.1, Field Duplicates:

- 20.1 The QAPP must address the collection of field blanks, e.g., equipment rinsate blanks and distilled/deionized water blanks.
- 20.2 The FSP (page 3) states that duplicates “will be collected at a frequency of one per sample delivery group or one per twenty samples collected.” The FSP further clarifies that duplicates will be collected based on the total number of samples collected from all WMUs. The QAPP specifies that duplicates will be collected “at a frequency of one per every ten routine samples” and does not clarify further. The QAPP and FSP must be consistent with each other.
- 20.3 The QAPP must include protocols for the collection and submittal of split samples to EPA, on an as requested basis.

21 Page 13, Section 2.4.2, Laboratory QA/QC Samples:

- 21.1 The QAPP must specify the required type and frequency of laboratory QA/QC samples. It must list the associated method or procedure and corrective action in the event of failure to meet established acceptance criteria. Laboratory QC samples include, but are not limited to, method and reagent blanks, duplicates, matrix spikes, and independent calibration verification standards. The QAPP must specify or reference the procedures to be used to calculate applicable statistics (e.g., precision, accuracy, and completeness).
- 21.2 Laboratory QA/QC samples are not collected by the sampling team, rather they are prepared in the laboratory by the laboratory personnel. Field personnel can be requested to collect sufficient volume of a pre-defined field sample and submit it to the laboratory so that the laboratory can prepare matrix spikes (organics and inorganics) and matrix spike duplicates (organics). The QAPP must be revised and corrected accordingly.
- 21.3 The QAPP states that “Other specific requirements associated with laboratory QA/QC are specified in the laboratory QAPP. The QAPP must address the facility’s protocols for review and approval of these requirements. Also, the laboratory’s QAPP must be provided to EPA for review.

22 Page 13, Section 2.5, Instrument/Equipment Testing, Inspection, and Maintenance Requirements: The QAPP must address the requirements specified in EPA QA/R-5,

Element B6: Instrument/Equipment Testing, Inspection, and Maintenance. Specifically, the QAPP must:

- 22.1 Describe how inspections and acceptance testing of instruments, equipment, and their components affecting quality will be performed and documented to assure their intended use as specified in the QAPP/FSP.
 - 22.2 Identify and discuss the procedure by which final acceptance will be performed by independent personnel (i.e., personnel other than those performing the work).
 - 22.3 Describe how deficiencies are to be resolved, when re-inspection will be performed, and how the effectiveness of the corrective action will be determined and documented.
 - 22.4 Describe or reference how periodic preventive and corrective maintenance of measurement or test equipment affecting quality will be performed to ensure availability and satisfactory performance.
 - 22.5 Identify all equipment requiring periodic maintenance, including major laboratory equipment.
- 23 Page 13, Section 2.6, Instrument Calibration and Frequency: The QAPP must address the requirements specified in EPA QA/R-5, Element B7: Instrument/Equipment Calibration and Frequency. Specifically, the QAPP must:
- 23.1 Identify all equipment requiring calibration, including major laboratory equipment.
 - 23.2 Describe or reference how and when calibration will be conducted and identify the certified equipment and/or standards used for calibration.
 - 23.3 Indicate how records of calibration will be maintained and be traceable to the instrument.
- 24 Page 13, Section 2.7, Inspection/Acceptance Requirements for Supplies and Consumables: The QAPP must describe how and by whom supplies and consumables will be inspected and accepted for use. It must state the acceptance criteria for such supplies and consumables. The QAPP must further clarify what is meant by "All other consumables will be decontaminated prior to use." Consumables include standards, reagents, calibration gases, and other materials that are consumed upon use and not amenable to decontamination.
- 25 Page 15, Section 2.9, Data Management: The QAPP must address the requirements

specified in EPA QA/R-5, Element B10: Data Management. Specifically, the QAPP must:

- 25.1 Describe the procedures for compiling and manipulating historical and project data or reference the applicable document control system. This includes a system for tracking field notebooks, field forms, and laboratory data packages.
 - 25.2 Discuss the control mechanism for detecting and correcting errors and for preventing loss of data during data reduction, data reporting, and data entry to forms, reports, and databases.
 - 25.3 The QAPP should invoke the use of ASTM E178-94, Standard Practice for dealing with Outlying Observations. The QAPP must further state that all project data will be reported, including outliers, and that data reports will identify the rationale for declaring data points as outliers.
- 26 Page 16, Section 3, Assessment/Oversight:
- 26.1 The QAPP must provide or reference the specific procedures for performing and documenting assessment and response activities.
 - 26.2 The QAPP must clarify who will conduct the laboratory audits.
 - 26.3 The QAPP must specify who prepares field surveillance and laboratory audit reports. It must also specify the contents of these reports.
 - 26.4 The QAPP must define the scope of authority of the assessors, including stop work orders, and when assessors are authorized to act.
- 27 Page 19, Section 3.2, Reports to Management: The QAPP must identify the distribution of listed reports.
- 28 Page 19, Section 4.1, Data Review, Validation, and Verification Requirements:
- 28.1 The QAPP must state the criteria used to review and validate data in an objective and consistent manner. It is not sufficient that the data be reviewed for consistency with previous results. They must be reviewed against method-specified criteria and validated against QAPP-specified criteria.
 - 28.2 The QAPP must specify who (and on what basis) will select the 10 percent of the data to be validated.
 - 28.3 The QAPP must address how the results of field duplicates will be used to

evaluate project data. How will data be flagged based on field duplicate results?

- 29 Page 19, Section 4.2, Validation and Verification Methods: The QAPP must describe or reference the specific procedures for verifying and validating project data. It must discuss how issues will be resolved and the authorities for resolving such issues.
- 30 Page 20, Section 4.3, Reconciliation with User Requirements:
- 30.1 The QAPP must identify who is responsible for data reconciliation.
- 30.2 The QAPP must describe how data reconciliation will be documented, issues will be resolved, and how limitations on data use will be reported.
- 30.3 The QAPP must clarify what is meant by "sufficient data of known quality." Data completeness objectives must be established and documented in the QAPP before data collection activities occur.
- 31 Page 20, Section 5, References: The QAPP must update the reference for EPA QA/R-5.

Attachment 10-1b: Field Sampling Plan

GENERAL COMMENTS

- 32 The FSP must reference and invoke the associated QAPP. If the FSP is intended to be a stand alone document for field personnel, then it must duplicate all QAPP-defined specifications for field activities, such as distribution and control of the FSP, calibration and use of field equipment, and roles and responsibilities related to field activities. If the FSP is intended as a fixed companion document to the QAPP, then the FSP must include a statement to that effect such that field personnel are aware of the fact that they need both documents in the field.
- 33 The FSP must reference and invoke all associated standard operating procedures, e.g., those of the sampling contractor.

SPECIFIC COMMENTS

- 34 Page 3, Section 3.2, Duplicate Groundwater Monitoring Well Sample:
- 34.1 The FSP must include protocols for the collection and submittal of split samples to EPA, on an as requested basis.

- 34.2 The FSP states that duplicates “will be collected at a frequency of one per sample delivery group or one per twenty samples collected.” The FSP further clarifies that duplicates will be collected based on the total number of samples collected from all WMUs. The QAPP (page 13) specifies that duplicates will be collected “at a frequency of one per every ten routine samples” and does not clarify further. The QAPP and FSP must be consistent with each other.
- 35 Page 3, Section 3.3, Laboratory Quality Control Samples: Laboratory QC samples are not collected by the sampling team, rather they are prepared in the laboratory by the laboratory personnel. Field personnel can be requested to collect sufficient volume of a pre-defined field sample and submit it to the laboratory so that the laboratory can prepare matrix spikes (organics and inorganics) and matrix spike duplicates (organics). The FSP must be revised and corrected accordingly.
- 36 Page 5, Section 5, Sampling Equipment and Procedures:
- 36.1 The FSP must list and describe all field equipment to be used in the sampling event, including sampling and measurement and test equipment. The FSP must specify which equipment will be disposable and which will require decontamination.
- 36.2 The FSP must define requirements related to quality control of reagents used in the field, e.g., sample preservation acid solutions and calibration standards.
- 36.3 The FSP must require the use of the same methods as those used to generate the historical data against which the project data will be evaluated.
- 36.4 The FSP must require the use of and specify the information that will be documented on chain-of-custody forms.
- 37 Page 7, Section 5.1.1: Sample Coding in Field Logbooks:
- 37.1 The FSP addresses sample coding for Matrix Spike Duplicate samples. The FSP must clarify the need for MS/MSD samples for Pond 17. If MS/MSDs are required, then they must be addressed in the QAPP as well.
- 37.2 The FSP must require the use of rain-resistant field notebooks and waterproof ink.
- 37.3 The FSP must require the following: The person recording the notes will sign and date the bottom of every page in the field notebook. Changes will be crossed out with a single line so that the original text remains legible; the change will be initialed and dated. Unused portions of logbook pages will be crossed out, signed,

and dated by the assigned individual at the end of each workday.

- 37.4 The FSP must require the sampling team to include the following information in the field notebook at the time of sample collection: date, well number and apparent condition, weather conditions, numerical value and units of each measurement, sample numbers, depth sampled, description of samples (e.g., color, odor, clarity), and conditions that might affect the representativeness of the samples.
- 38 Page 8, Section 5.1.2, Sample Coding on Sample Containers: The FSP must clarify the protocols the sample team leader will use to “create a unique number for each sample container.” Also, EPA procedures related to field notebook records and custody forms have been established to provide redundancy of sampling information. Under the proposed system, the information in the field notebooks is not duplicated elsewhere. The FSP must provide for a backup system for reconciling these numbers with the “true sample codes” in the event that the field notebook is lost or damaged.
- 39 Pages 8-10, Section 5.2.2, Well Purging: Current EPA protocols dictate the use of low flow/low stress purging and sampling. The FSP must either replace this discussion with a discussion for low flow/low stress purging techniques or provide a rationale for using traditional purging techniques.
- 40 Page 10, Section 5.2.3, Well Sampling:
- 40.1 The FSP states that “Normally, groundwater samples with turbidity levels >10 NTU will be analyzed for both total and dissolved metals.” The FSP must either clarify which project samples for metals analysis will be filtered (dissolved metals) and which will not (total metals), or provide a definitive decision point and protocols for this determination.
- 40.2 The procedure offers the choice of glass or polyethylene sample containers. Table 3 (page 13) and the QAPP require the use of polyethylene sample containers. The FSP must be corrected to be consistent within itself and with the QAPP.
- 40.3 The procedure addresses steps for collecting and preserving filtered samples for dissolved metals, but does not address the collection and preservation of unfiltered samples for total metals. If samples may be collected for total metals, specific procedures must be provided on how these samples are to be collected and preserved.
- 40.4 The FSP must provide detailed procedures for the collection and preservation of samples for ammonia, water quality, and orthophosphate.

- 41 Page 11, Section 5.3, Duplicate Groundwater Monitoring Well Sample Collection: The FSP must clarify what is meant by "bottles with two different sample designations will be alternated in the filling sequence."
- 42 Page 11, Section 5.5, Conductivity, Temperature, Turbidity, and pH Measurements: The FSP must describe or reference specific procedures for the calibration and use of each piece of field measurement and test equipment. These procedures must specify applicable documentation requirements for field measurements.
- 43 Pages 11-12, Section 5.6, Equipment Decontamination Procedure: The FSP offers choices as to how the same piece of equipment will be decontaminated. For example, water probes will be "rinsed with de-ionized water or cleaned in a detergent solution and rinsed once in fresh water after each use." The FSP must either designate specific decontamination procedures or provide decision criteria and protocols for selecting decontamination procedures.
- 44 Page 13, Section 6.1, Sample Handling:
- 44.1 The FSP must specify the procedures in place to ensure the continued integrity of the samples by guarding against cross contamination or degradation.
- 44.2 The FSP must specify the procedures in place to ensure a continuous chain of custody from sample collection to sample receipt by the laboratory.
- 44.3 Pre-cleaned and certified sample containers should not be rinsed prior to use. The FSP must be corrected regarding this matter.

ATTACHMENT 10-2: RCRA SAMPLING AND ANALYSIS PLAN FOR TEMPERATURE AND PRESSURE MONITORING AT POND 17, JUNE 2001

Attachment 10-2a: Quality Assurance Project Plan

GENERAL COMMENTS

- 1 The QAPP must list the individuals/organizations to whom the approved QAPP, FSPs, and subsequent revisions will be issued. This list should include all persons responsible for implementation, the QA managers, and representatives of each group or organization involved.

SPECIFIC COMMENTS

- 2 Page 1, Section 1, Project Management: The QAPP must invoke and comply with the most recent version of *EPA Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March 2001. This document and its companion guidance document (EPA QA G-5) are available through EPA's website.
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 - 3.2 The QAPP must identify a project quality assurance manager and demonstrate that she or he is independent of the data generating unit. This does not require independence from senior corporate managers who are nominally, but not functionally, involved in data generation, use, or decision-making.
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 - 3.5 The QAPP must specify the nature and extent of the authority (e.g., stop and start work, hiring and firing of personnel) of each function.

- 3.6 The QAPP must describe the protocols in place to verify the qualifications and capacity of support contractors, select support contractors, monitor each contractor's performance, and verify and ensure initial and continued compliance with the QAPP and associated FSP. These protocols must address specific procedures and responsibilities.
- 4 Page 3, Section 1.2, Background: The QAPP must state the specific problem to be solved, decision to be made, or outcome to be achieved. The QAPP must also provide sufficient background information to provide a historical, scientific, and regulatory perspective for this particular project, i.e., groundwater monitoring relative to the closure of Pond 17.
- 5 Page 3, Section 1.3, Project Description: The QAPP must provide a summary of all work to be performed and products to be produced under this project at the Pond 17 WMU. The QAPP must explain how this project will resolve the problem or question described under Section 1.2, once revised.
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- 6.2 Discuss how such training will be provided and how the necessary skills will be assured and documented.
- 7 Page 8, Section 1.7, Documentation and Records: The QAPP must address the document control requirements specified in EPA QA/R-5, Element A9: Documents and Records. Specifically, the QAPP must:
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- 7.2 Itemize the information and records that must be included in the data report package and specify the reporting format for hard copy and any electronic forms.
- 7.3 Identify any other records and documents that will be produced.
- 7.4 Specify or reference all applicable requirements for the final disposition of records and documents.

- 8 Pages 8-9, Section 2.3, Analytical Methods Requirements:
- 8.1 The QAPP must describe how system failures are to be addressed, specify responsibilities for corrective action, and address how the effectiveness of corrective actions will be determined and documented.
 - 8.2 The QAPP must provide or reference specific procedures for operating each piece of equipment and for each measurement activity. These procedures must specify applicable documentation requirements.
- 9 Page 9, Section 2.3.3, Gas Sampling: The QAPP must specify the conditions under which gas sampling will be required.
- 10 Page 9, Section 2.4, Quality Control Requirements: The QAPP must address measurement representativeness, comparability, and completeness. It must provide or reference procedures for the generation of QC data associated with project measurements. QC data may include field operating conditions and replicate measurements.
- 11 Page 10, Section 2.5, Instrument/Equipment Testing, Inspection, and Maintenance Requirements:
- 11.1 Temperature and pressure sensors should be inspected prior to each use.
 - 11.2 The QAPP must indicate how and by whom maintenance records will be maintained and be traceable to the instrument.
- 12 Page 10, Section 2.6, Instrument Calibration and Frequency: The QAPP must indicate how and by whom calibration records will be maintained and be traceable to the instrument.
- 13 Page 10, Section 2.9, Data Management: The QAPP must address the requirements specified in EPA QA/R-5, Element B10: Data Management. Specifically, the QAPP must:
- 13.1 Describe the procedures for compiling and manipulating project data or reference the applicable document control system. This includes a system for tracking field notebooks and data logger data files.
 - 13.2 Discuss the control mechanism for detecting and correcting errors and for preventing loss of data during data reduction, data reporting, and data entry to forms, reports, and databases.

- 14 Pages 11-12, Section 3, Assessment/Oversight:
- 14.1 The QAPP must provide or reference the specific procedures for performing and documenting assessment and response activities.
 - 14.2 The QAPP must specify who prepares field surveillance and laboratory audit reports. It must also specify the contents of these reports.
 - 14.3 The QAPP must define the scope of authority of the assessors, including stop work orders, and when assessors are authorized to act.
- 15 Page 12, Section 4.1, Data Review, Validation, and Verification Requirements: The QAPP must state the criteria used to review and validate data in an objective and consistent manner. It is not sufficient that the data be reviewed for consistency with previous results. They must be reviewed against method-specified criteria and validated against QAPP-specified criteria.
- 16 Page 19, Section 4.2, Validation and Verification Methods: The QAPP must describe or reference the specific procedures for verifying and validating project data. It must discuss how issues will be resolved and the authorities for resolving such issues.
- 17 Pages 12-13, Section 4.3, Reconciliation with User Requirements:
- 17.1 The QAPP must identify who is responsible for data reconciliation.
 - 17.2 The QAPP must describe how data reconciliation will be documented, and how issues will be resolved and reported.
 - 17.3 The QAPP must clarify what is meant by "sufficient data of known quality." Data completeness objectives must be established and documented in the QAPP before data collection activities occur.
 - 17.4 The QAPP must specify the actions to be taken in the event that the temperature, pressure, or gas measurements indicate an increase from previous measurements.
 - 17.5 The QAPP must clarify that if gas concentrations indicate that further information on gas characteristics must be generated, that this QAPP must be revised as necessary to meet the additional data needs.
- 18 Page 13, Section 5, References: The QAPP must update the reference for EPA QA/R-5.

Attachment 10-2b: Field Sampling Plan

GENERAL COMMENTS

None.

SPECIFIC COMMENTS

- 19 Page 1, Section 1, Introduction: The FSP must specify that if it is not a stand alone document, then it is a fixed companion document to the QAPP. If it is a stand alone document then it must include all QAPP-defined specifications for field activities. FMC must ensure that field personnel must have access to both documents in the field.
- 20 Page 5, Section 4.1: Field Logbooks:
 - 20.1 The FSP must require the use of rain-resistant field notebooks and waterproof ink.
 - 20.2 The FSP must require the following: The person recording the notes will sign and date the bottom of every page in the field notebook. Changes will be crossed out with a single line so that the original text remains legible; the change will be initialed and dated. Unused portions of logbook pages will be crossed out, signed, and dated by the assigned individual at the end of each workday.
 - 20.3 The FSP must require the field team to include the following information in the field notebook at the time of data measurement: well identification and apparent condition, and numerical value and units of each measurement.

APPENDIX D: FIELD SAMPLING PLAN FOR EQUIPMENT DECONTAMINATION CONFIRMATION DURING RCRA POND CLOSURES, JUNE 2001

GENERAL COMMENTS

- 1 The subject Field Sampling Plan (FSP) must either reference and invoke a companion Quality Assurance Project Plan (QAPP) or include all of the elements required by the most recent version of *EPA Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March 2001. This document and its companion guidance document (EPA QA G-5) are available through EPA's website. Specifically, the FSP must address EPA QA/R-5 requirements related to:
 - 1.1 Distribution
 - 1.2 Project/Task Organization
 - 1.3 Quality Objectives and Criteria
 - 1.4 Special Training/Certification
 - 1.5 Documents and Records
 - 1.6 Sampling Process Design
 - 1.7 Instrument/Equipment Testing, Inspection, and Maintenance
 - 1.8 Instrument/Equipment Calibration and Frequency
 - 1.9 Inspection/Acceptance of Supplies and Consumables
 - 1.10 Data Management
 - 1.11 Assessment and Response Actions
 - 1.12 Reports to Management
- 2 The FSP must provide the rationale for addressing activities related to rinsate and distilled water blanks in a separate and distinct document. Rinsate and distilled water blanks are generally addressed in the same QAPP/FSP as the associated field samples. The FSP must also address how the data collected under this FSP are correlated with the associated field samples.

**Pond 17 Closure Plan NOD 2 QAPP
CONCURRENCES:**

INITIALS					POLICY	FINANCIAL INFO	SUBMITTED
	Meyer	Boyd			YES	NO	YES NO X
DATE	11-5-01				IF YES, BCC ATTACHED		

PEER REVIEW:

INITIALS					
	Palumbo	Fisher	Brown	Orlean	Hedeen
DATE	11/6	11/6/01			